

AMENDMENTS TO THE CLAIMS

1 Claims 1-45 were previously pending.

2 Claims 15-27 and 34-45 are canceled without prejudice.

3 No claims are amended.

4 No claims are added.

5 Accordingly, claims 1-14 and 28-33 are pending.

6
7 1. (Originally Presented) A test system for testing an in-test host's
8 support of USB peripherals, the test system comprising:

9 one or more USB interfaces configured to communicate with one or more
10 USB ports of the in-test host to communicate USB messages with the in-test host;
11 a network interface configured to communicate with a peripheral emulator
12 using a network communications protocol;

13 operating logic configured to perform actions comprising:

14 receiving USB command messages from the in-test host;

15 sending the received USB command messages to the
16 peripheral emulator through the network interface using the network
17 communications protocol; and

18 receiving USB response messages from the peripheral
19 emulator through the network interface using the network
20 communications protocol;

21 sending the received USB response messages through the one
22 or more USB interfaces to the in-test host.

1 2. (Originally Presented) A test system as recited in claim 1, further
2 comprising the peripheral emulator, wherein the peripheral emulator is
3 programmed to emulate one or more USB peripherals.

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5 3. (Originally Presented) A test system as recited in claim 1, further
6 comprising the peripheral emulator, wherein the peripheral emulator is
7 programmed to emulate HID, bulk, and isochronous USB peripherals.

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9 4. (Originally Presented) A test system as recited in claim 1, further
10 comprising the peripheral emulator, wherein the peripheral emulator comprises a
11 general-purpose computer programmed to emulate one or more USB peripherals.

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13 5. (Originally Presented) A test system as recited in claim 1, further
14 comprising the peripheral emulator, wherein the peripheral emulator comprises a
15 general-purpose computer programmed to emulate HID, bulk, and isochronous
16 USB peripherals.

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18 6. (Originally Presented) A test system as recited in claim 1, further
19 comprising the peripheral emulator, wherein:

20 the peripheral emulator comprises a general-purpose computer;
21 the general-purpose computer is programmed to emulate one or more USB
22 peripherals; and
23 the general-purpose computer is further programmed to generate USB
24 response messages that test the in-test host with ranges of USB peripheral
25 parameters.

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2 7. (Originally Presented) A test system as recited in claim 1, further
3 comprising the peripheral emulator, wherein:

4 the peripheral emulator comprises a general-purpose computer;
5 the general-purpose computer is programmed to emulate one or more USB
6 peripherals; and
7 the general-purpose computer is further programmed to generate abnormal
8 USB response messages in order to test the in-test host with such abnormal USB
9 response messages.

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11 8. (Originally Presented) A test system as recited in claim 1, wherein:
12 a particular USB command message is designated for a particular one of a
13 plurality of different emulated peripheral devices;
14 the network communications protocol supports a plurality of logical ports;
15 the operating logic maintains a correspondence between emulated
16 peripheral devices and logical ports; and
17 the operating logic sends said particular USB command message to one of
18 the logical ports that corresponds to said particular one of the plurality of different
19 emulated peripheral devices.

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21 9. A test system as recited in claim 1, wherein the one or more USB
22 interfaces comprise at least four USB interfaces.

1 **10.** (Originally Presented) A test system as recited in claim 1, wherein
2 the USB messages comprise HID, bulk, and isochronous USB messages.

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4 **11.** (Originally Presented) A test system as recited in claim 1, wherein
5 the network interface comprises an Ethernet interface.

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7 **12.** (Originally Presented) A test system as recited in claim 1, wherein
8 the network communications protocol comprises an Ethernet communications
9 protocol.

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11 **13.** (Originally Presented) A test system as recited in claim 1, wherein
12 the network communications protocol comprises an IP protocol.

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14 **14.** (Originally Presented) A test system as recited in claim 1, wherein
15 the network communications protocol comprises UDP over IP.

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17 **15.** (Cancelled)

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19 **16.** (Cancelled)

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21 **17.** (Cancelled)

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23 **18.** (Cancelled)

1 19. (Cancelled)

2 20. (Cancelled)

3 21. (Cancelled)

4 22. (Cancelled)

5 23. (Cancelled)

6 24. (Cancelled)

7 25. (Cancelled)

8 26. (Cancelled)

9 27. (Cancelled)

10 28. (Originally Presented) A method of testing an in-test host's support
11 of USB peripherals, comprising:

12 receiving USB command messages from the in-test host;

13 packaging the received USB command messages in command data packets
14 formatted in accordance with a network communications protocol;

15 sending the command data packets to one or more peripheral emulators
16 over network communications media;

1 receiving response data packets from the one or more peripheral emulators
2 over the network communications media, wherein the response data packets are
3 formatted in accordance with a network communications protocol;

4 unpackaging USB response messages from the received response data
5 packets;

6 sending the unpackaged, USB response messages to the in-test host.

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8 29. (Originally Presented) A method as recited in claim 28, further
9 comprising emulating one or more different USB peripherals within the one or
10 more peripheral emulators to create the incoming USB messages.

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12 30. (Originally Presented) A method as recited in claim 28, further
13 comprising creating abnormal USB response messages in response to the
14 packaged USB command messages and packaging said abnormal USB response
15 messages in the response data packets in order to test the in-test host's ability to
16 handle such abnormal USB response messages.

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18 31. (Originally Presented) A method as recited in claim 28, wherein the
19 network communications protocol comprises an Ethernet communications
20 protocol.

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22 32. (Originally Presented) A method as recited in claim 28, wherein the
23 network communications protocol comprises an IP protocol.

1 **33.** (Originally Presented) A method as recited in claim 28, wherein the
2 network communications protocol comprises UDP over IP.

3 **34.** (Cancelled)

4 **35.** (Cancelled)

5 **36.** (Cancelled)

6 **37.** (Cancelled)

7 **38.** (Cancelled)

8 **39.** (Cancelled)

9 **40.** (Cancelled)

10 **41.** (Cancelled)

11 **42.** (Cancelled)

12 **43.** (Cancelled)

13 **44.** (Cancelled)

1 45. (Cancelled)

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